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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,940	07/29/2003	Charles Hartman	200310736-1	9039

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FORT COLLINS, CO 80527-2400

EXAMINER
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DALEY, CHRISTOPHER ANTHONY

ART UNIT	PAPER NUMBER
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2111

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/629,940	<b>Applicant(s)</b> HARTMAN ET AL.	
	<b>Examiner</b> Christopher A. Daley	<b>Art Unit</b> 2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1 – 18 are pending.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 –4, 9-14, 16-18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (US20030046499) in view of Ajanovic (US5859988).

4. As to claims 1, 11, and 16, Kelley discloses a configurable I/O bus architecture, comprising:

a system bus interface device (Figure 2 illustrates a computer system comprising mass storage devices coupled directly and indirectly to the CPU interface);

first and second I/O bus interface devices (Figure 2 illustrates mass storage elements with said interfaces such as 204A and 204C); first and second intermediate buses (Figure 2 illustrates local bus and PCI bus, page 3, paragraph 0032);

a switching device(Said device is bus controller 201, page 3, paragraph 0034);

the first intermediate bus couples the system bus interface device to the first I/O bus interface device (First I/O interface in 204C is coupled to system bus, page 3, paragraph 0032); the second intermediate bus directly couples the system bus interface device to

the switching device (Figure 2 illustrates the direct coupling of first I/O interface of 204a to first I/O bus interface 100, page 3, paragraph 0034);

the switching device is operable to couple the second intermediate bus either to the first or to the second I/O bus interface device responsive to the steering signal (The bus control 201 afford such selection, page 3, paragraph 0030).

Lin does not explicitly disclose a steering signal.

However, Ajanovic teaches a steering signal (Arbitration and control unit 308 produces a signal that determined the coupling of interface unit 301 to 302, COL. 5, line 65 – COL. 6, line 3). It would have been obvious to one of ordinary skill in the art would have used the bridge of Ajanovic in the system of Lin to have expansion capability within the Lin system, COL. 2, lines 50 - 58. One of ordinary skill in the art would have been motivated to use the bridge of Ajanovic in the system of Lin to have expansion capability within the Lin system, COL. 2, lines 50-58.

5. As to claims 2, 12, and 17 Ajanovic discloses the configurable I/O bus architecture: further comprising at least a first signal indicating whether an I/O device is coupled to the second I/O bus interface device (Signal 206 is said signal, COL. 7, lines 40 - 45); and

wherein the steering signal is derived from the first signal such that the steering signal assumes a first state when the I/O device is so coupled and a second state when the I/O device is not so coupled (The steering signal arbitrates the enablement of either interface 302 or 303, COL. 7, lines 10 - 25).

6. As to claims 3, 13, and 18, Ajanovic discloses the configurable I/O bus architecture, wherein:

the switching device couples the second intermediate bus to the second I/O bus interface device when the steering signal assumes the first state, and couples the second intermediate bus to the first I/O bus interface device when the steering signal assumes the second state (The steering signal arbitrates the enablement of either interface 302 or 303, COL. 7, lines 10 - 25).

7. As to claims 4 and 14, Ajanovic discloses the configurable I/O bus architecture: further comprising a second signal indicating whether the I/O device is coupled to the second I/O bus interface device (Figure 3 illustrates control signal from arbiter 308 to second interface 303 ); and

wherein the steering signal is derived from both the first and second signals using a logic gate (It is well known in the art that the inputs of controlled elements are inputs into the arbitration logic).

8. As to claim 9, Ajanovic discloses the configurable I/O bus architecture:

wherein the first and second intermediate buses are rope buses (Figure 2 illustrates an embodiment where a rope configuration is present, Col. 3, lines 28 - 63).

9. As to claim 10, Lin discloses The configurable I/O bus architecture, wherein:

the switching device is operable to directly couple the second intermediate bus either to

the first or to the second I/O bus interface device responsive to the steering signal  
(Figure 2 illustrates the direct coupling of interface 204a or first interface 204c).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 5 – 8, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ajanovic in view of Alexander et al (US6510529), hereinafter Alexander.

12. As to claim 5, 7 – 8, and 15, Ajanovic does not disclose a hand-operated switch for an I/O bus;

However, Alexander teaches of a hand-operated switch 104 controlled by a panel button that will enable/disable the coupling of PCI bridge 108 to system controller 102. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Alexander into Ajanovic as Alexander's teaching provides a human safety over-ride, when a fault condition arises COL. 5, lines 43 – 67. One of ordinary skill in the art would have been motivated to use the bridge of Ajanovic in the system of Alexander to provide a manual safety override, when a fault occurs, COL. 5, lines 43 – 67.

13. As to claim 6, Ajanovic discloses the configurable I/O bus architecture, wherein: the switching device couples the second intermediate bus to the second I/O bus interface device when the steering signal assumes the first state, and couples the second intermediate bus to the first I/O bus interface device when the steering signal assumes the second state ((The steering signal arbitrates the enablement of either interface 302 or 303, COL. 7, lines 10 - 25).

### ***Response to Arguments***

14. Applicant's arguments with respect to claims 1, 11, and 16 have been considered but are moot in view of the new ground(s) of rejection. With regards to the applicant's argument that prior art does not teach a second intermediate interface bus directly couples the system bus interface device to the switching device. The examiner points to the teaching of Lin. Figure 2 illustrates the direct coupling of first I/O interface of 204a to first I/O bus interface 100, page 3, paragraph 0034.

### ***Conclusion***


15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Daley whose telephone number is 571 272 3625. The examiner can normally be reached on 9 am. - 4p m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571 272 3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CAD  
3/15/2007



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